

Anekant Education Society's
**Tuljaram Chaturchand College of Arts, Science and Commerce College,
Baramati**
(Autonomous)
Affiliated to Savitribai Phule Pune University

Course Work for Ph.D. Programme in Botany

- 1 Ph.D. course work shall be of 16 credits + 02 Credits of Research and Publication Ethics (RPE) proposed by UGC.
- 2 The course work shall be treated as prerequisite for Ph.D. programme.

The Ph. D. Course work shall consist of the following components, namely :

Course - 1 : Research Methodology : 4 credits (Including Quantitative methods, Computer applications, research ethics and review of published research in the relevant field, training, field work, etc).

Course - 2 : Writing of Research Proposal for obtaining financial assistance from national funding agencies : **1 credit**
Writing of Review : **1 credit**
Seminars : **2 credits**

Subject specific advanced level courses : 8 credits

Course - 3 : Advances in Botany-I : 4 credits

- Plant-animal and plants-microbes interaction
- Biodiversity: genetic, species, molecular diversity and taxonomy, DNA bar coding, population genetics, conservation of biodiversity and endangered species, Evolution.
- Climate change and carbon sequestration
- Algal Biofuels
- Remediation of degraded/contaminated ecosystem by plants microbes
- Recent nomenclature of Plants

Course - 4 : Advances in Botany-II : 4 credits

- Advanced in plant science w.r.t. secondary metabolite production
- Genetically modified plants for improved tolerance to biotic abiotic stress
- Molecular generics of plant development
- Mechanism of plant hormone action
- Signal transduction in plants

Course – 5 : Research and Publication Ethics (RPE) : 2 Credits

Theory (1 Credit)

RPE 01 : Philosophy and Ethics

RPE 02 : Scientific Conduct

RPE 03 : Pblication Ethics

Practice (1 Credit)

RPE 04 : Open Access Publishing

RPE 05 : Publication Misconduct

RPE 06 : Databases and Research Metrics

Examination Pattern : External : 70 Marks + Internal : 30 Marks (for each paper)

Internal Exam Pattern : Class Assessment - I : 10 Marks
Class Assessment - II : 10 Marks
Home Assignment : 10 Marks
